

**The claims defining the invention are as follows:**

1. A device for preventing deep vein thrombosis, said device comprising:
  - at least one sleeve adapted to be disposed substantially around a lower limb of
  - 5 a wearer, each sleeve comprising a bladder adapted to substantially encapsulating said lower limb of said wearer, said bladder section being divided into a plurality of inflatable chambers arranged co-axially to form a sequence of chambers, wherein said inflatable chambers are in fluid communication with each other in a manner such that fluid in any one of said chambers is allowed to pass to a next chamber in said sequence
  - 10 of chambers once a fluid pressure reaches a predetermined value; and
  - a pneumatic pressure source, in fluid communication with a first inflatable chamber in said sequence of chambers of each sleeve, for periodically inflating and deflating said chambers of said sleeves.
- 15 2. The device according to claim 1 wherein each sleeve further comprises an inelastic outer casing thereby restricting expansion of said chambers during inflation to an inwardly direction.
- 20 3. The device according to claim 1 or 2 wherein said pneumatic pressure source comprises:
  - a compressor for supplying pneumatic pressure; and
  - at least one solenoid for controllably communicating said pneumatic pressure to said at least one sleeve.

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4. The device according to any one of claims 1 to 3 wherein each sleeve further comprises tension straps for adjusting said sleeve to fit the shape of said lower limb of said wearer.

5 5. The device according to any one of claims 1 to 4 wherein said pneumatic pressure source is portable.

6. A method of preventing deep vein thrombosis, said method comprising the steps of:

10 providing a sleeve for substantially encapsulating a lower limb of a wearer, said sleeve comprising a bladder being divided into a plurality of inflatable chambers arranged co-axially to form a sequence of chambers;

inflating a first chamber located at a distal end of said lower limb of said wearer;

15 sequentially inflating subsequent chambers until all chambers of said bladder are inflated, thereby providing a source of compression pressure to said lower limb which grows substantially continuously from said distal end towards a proximal end of said limb; and

deflating said chambers.

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7. A device for preventing deep vein thrombosis substantially as described herein with reference to the accompanying drawings.